

SCHOOLYARD BIOBLITZ

Outdoor Presentation and Activity
Prepared for Monarch Mayhem 2020

OVERVIEW & PURPOSE

The purpose of this lesson is to help participants understand the diversity of life around them as well as human impact on the environment, introduce the iNaturalist Canada app and have them create their first wildlife observations on it. The lesson begins with a short introduction followed by an outdoor activity using the app.

ESTIMATED TIME: 45 MINUTES TOTAL

15 minute presentation + 30 minute activity.

OBJECTIVES

1. Understand the purpose of iNaturalist Canada.
2. Experience using the mobile app, including uploading observations and making identifications.
3. Improve wildlife photography and identification skills as well as understanding of the natural world and the human impact on it.

MATERIALS NEEDED

1. Mobile phone or tablet. One per participant.
2. Internet connection or data to download iNaturalist app, upload observations and make identifications (this can be done before and after the outdoor activity). This app is free to use. Available on [iOS](#) and [Android](#).
3. Optional: Digital camera. These photos can be uploaded via the [website](#).

VERIFICATION

Steps to check for participant understanding

1. Students show fluency with the app by making an identification.
2. By taking photos and creating an observation.
3. Through the reflection activity, students will showcase their understanding of the human impact on the environment, using the area explored as a case study.

PRESENTATION

Have students download the iNaturalist app prior to lesson. Enable location to improve wildlife identifications.

Introduction: Does anyone know what citizen science is? Citizen science is public participation to help scientific research. iNaturalist is a citizen science platform and so much more. It goes beyond collecting information: it's a two way street, you can find out more about wildlife, learn how to ID species and contribute to science all at the same time!

The premise of iNaturalist is to observe, upload and identify life around you. You can create observations, explore Canada's wildlife, speak to biologists and other wildlife experts as well as join projects to learn more about a group of species you are interested in. By uploading observations or making identifications you are helping to track Canada's biodiversity and this makes a real impact on conservation. Ever wondered what kind of bird lives in the tree outside your home or the 'weeds' growing along the sidewalk? The iNaturalist community can help you answer these questions.

What is an Observation:

An observation records an encounter with an individual organism at a particular time and location. This includes encounters with signs of organisms like tracks or nests. When you make an observation, you'll record:



To begin, download and open the app on your phone or tablet. You will be asked to create a profile, including a username. This information can always be edited later on. It is advised not to use any personal or identifiable information in your username. Click on the three bars on the upper left hand corner and hit the explore tab to see what other people have observed. Take a look at what others have observed in your area. Click on an observation to see more photos as well as interesting information on identified organisms.

Verifiable Observations: You may notice that some observations say RG (research grade). If an observation has the 5 things we listed before: who you are, where you saw it, what you saw, when you saw it and evidence of what you saw, it is called a verifiable observation. These observations can be used by scientists and others who need this wildlife information. **Research grade** means $\frac{2}{3}$ of identifiers agree on a species or group. **Needs ID** means either no one has identified the organism yet or less than $\frac{2}{3}$ of identifiers agree. If an observation is missing one or more of these things, it is called **'casual'** and will not be used to gather scientific information. Remember to look for wild organisms and not ones owned or grown by people. If you still want to add these observations, remember to click the captive or cultivated button when creating the observation.

Making an Identification: Do you see a plant or animal you recognize on the Explore tab? Try suggesting or agreeing with an ID.

Joining a project: Interested in turtles? There's a project for that called 'Help the Turtles'. Projects are a way to learn more about a group of species, help scientists and speak to experts. Click on the projects tab under the three bars on the left hand side. Search for the project **'Schoolyard Bioblitz 2020'**. Click 'join' the project. The purpose of this project is to take a survey of biodiversity (or lack of) within schools or other local properties across Canada in early October 2020. It is also a method of encouraging students to connect with nature in their local area. Now all of your observations will automatically be added to this project. Students can click 'news' to see journal posts and 'about' to learn more about the project requirements.

You can also add observations to a project manually by searching for it when you upload or edit an observation. For a more specific project where only one group of species is being focused on, you might need to do this.

Looking for Life: You will be creating observations today so we have some tips on how students can get the perfect shot. If possible, get closer - there is a multitude of life around us. You might see a new plant within the grass you've never noticed before or a troop of ants walking along the ground. If the organism is too far or difficult to take a photo on your phone, it is possible to create an observation tagging your location and then uploading a digital camera image when you can transfer it to the app or website. Also take photos of the organism from different angles. It is possible (and encouraged) to upload multiple photos to an observation. Clear in focus photos will get the best identifications. You can also upload sound files to iNat, including bird and frog songs.

ACTIVITY

Set out the parameters of the outdoor area (eg: where they should explore) and let everyone know to meet back at this spot in 15 minutes. Pair off or let participants partner up in teams of two or more at a safe distance and aim for a goal of 8 observations per device. Ask everyone to open the app on their phones and click the '+' on the bottom right hand corner and select take photo.

Start looking for wildlife. iNaturalist includes all living things - plants, insects, fungi, mammals and much much more! You can take a photo directly on the app and pinpoint your location using GPS.

Note: you do not need an internet connection outside. The app will store observations you create and automatically upload them when you get back on WiFi.

Reflection

This can be done by walking around and speaking to participants during the activity or when everyone meets afterwards. It is important to reflect on what was learnt and the importance of it to make a lasting impact. Try asking some of the following questions:

Did you find any new living things you had never seen before?

Was there more or less diversity of life than you expected?

What is the human impact on the environment in this area?

What do you think would increase biodiversity in this area?

Have any iNat community members suggested an identification on your observations (if internet connection available)?

Do you think you will use iNaturalist in the future?

How do you think we could change this area to be more suitable for local wildlife while also being usable by people?

FAQ

I have no idea what this organism is, what do I put in the ID field?

iNaturalist's computer vision software will automatically match your photos to similar species when you press on the 'what did you see?' field when creating an observation. Take a look and decide what looks like your organism. This can be to any taxonomic level, including order, class, genus or species. Remember iNaturalist is a learning tool, you don't need to know what the organism is!

I am concerned about my privacy or the wildlife's (eg: it has a high risk of being harassed or poached).

You can change your geoprivacy settings to hide the observation location to everyone except project managers, who are mostly scientists. For wildlife at a high risk of being collected, poached or harassed, iNaturalist automatically hides the location.

Guide participants to iNaturalist.ca's 'Help' or 'Community Forum' pages to address any unanswered questions.